

SOME RECORDS OF MOTHS (LEPIDOPTERA) FROM MANGROVES IN SOUTHERN QUEENSLAND

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Abstract

This paper presents mangrove food plant records, locality data and biology notes for moths bred from mangrove environments in southern Queensland.

Introduction

This paper is part of a series on mangrove insects (De Baar and Hockey, 1987; Hockey and De Baar, 1988), bred or collected from mangrove ecosystems in southern Queensland. The paper by Hutchings and Recher (1982) provides a comprehensive introduction to the literature on mangrove fauna. Much of the previous entomological work was incidental to research on the crustacean and molluscan fauna. These works often present their insect components as lists of insects identified, for the most part, to order (Anonymous, 1977; Ellway, 1974).

While there are some ubiquitous species in the mangroves, examples being *Achaea janata* (Linnaeus) and *Syntherata janetta* (White), the mangrove fauna also contains specialised components such as the xylorectine *Echiomima* sp. The ecological relationships between these insects is poorly known for any Australian mangrove system but presents many interesting research opportunities.

Methods and Materials

Material with insect attack was collected and removed to cages in a temperature controlled insectary. Voucher specimens are deposited in the Queensland Forest Insect Collection (QFIC). Data on insects not identifiable to species are preceded by their QFIC registration number.

The mangrove taxa mentioned in the text are: *Aegicerus corniculatum* (L.) (Myrsinaceae); *Avicennia marina* (Forsk) Vierk (Avicenniaceae); *Cerriops tagal* (Perr.) C.B.Rob. (Rhizophoraceae); *Excoecaria agallocha* L. (Euphorbiaceae); *Rhizophora stylosa* Griff. (Rhizophoraceae).

Locations of sites mentioned in the text are: Brisbane, 27°28'S 153°01'E; Coochin Ck, 26°53'S 152°59'E; Glass Mountain Ck, 26°59'S 153°1'E; Maryborough, 25°32'S 152°42'E; Port Alma, 23°35'S 150°52'E; Redland Bay, 27°37'S 153°18'E; and Tooloom Scrub, 28°37'S 152°25'E.

Moth Records

Family Cosmopterigidae

Labdia sp. nr. *deliciosella* Walker. QFIC 6243/11. Port Alma, 2 adults emerged 1.i.1986 from branch of *E. agallocha*.

Family Cossidae

Macrocyttara expressa (Lucas). Indooroopilly Is., Brisbane, 11 males, 9 females emerged in the period 25.x.1985 to 10.iv.1986 from stems of *A. corniculatum*. Although the collected material still contained active larvae, no adults emerged from December 1986 to February 1987; Glass Mountain Ck, via Beerburum, 26.iii.1986, larvae were collected in the stem of *A. corniculatum*; Coochin Ck via Beerwah, 2.iv.1986, larvae were collected in the stem of *A. corniculatum*; Corinda, Brisbane, 12.iii.1987, 1 male to mercury vapour light.; Tooloom Scrub, 21.i.1937 E.J. Dumigan, (1 male in the University of Queensland Collection).

Illidge and Quail (1903) thoroughly described the insect and its effect on *A. corniculatum*. Since the type series was collected near Bulimba, Brisbane circa 1900, collection records are: a single specimen collected near Gympie, in Australian National Insect Collection (E.D. Edwards, pers. comm.), some specimens taken at light in Brisbane (B.K. Cantrell, pers. comm.) and our records. A number of authors have referred to *Macrocyttara* as attacking *E. agallocha* (Common, 1970; Hutchings and Recher, 1982). The only basis that we can find for this is a comment by Turner (1945) who states it was 'bred in large numbers by Mr R. Illidge from larvae tunnelling the stems of the "milky mangrove" ' (*E. agallocha* is commonly known as the milky mangrove). However, in Turner's only reference, Lucas (1902), there is no reference to this plant. Examination of the original paper (Illidge and Quail, 1903) leaves no doubt that only *A. corniculatum* (as *Aegicerus majus* Gaertner) has been recorded as a host. The larva was illustrated in colour by Common (1990) and De Baar and Hockey (1987).

Family Gelechiidae

?*Anarsia* sp. QFIC 6388/01. Long Pocket, Brisbane, larvae were collected 23.i.1987 boring into the fruits of *A. corniculatum*. Four adults emerged 10.ii.1987.

Family Geometridae

Anisozyga sp. QFIC 6415. Long Pocket, Brisbane, larva collected 20.ii.1987 feeding on leaves of *A. corniculatum*. Adult emerged 13.iii.1987.

Family Limacodidae

Doratifera unicolor Swinhoe. Mary River Heads, nr Maryborough, cocoons were collected 27.ii.1986 on the stem of *R. stylosa*. Adults emerged 27-28.ix.1986. The small trees had been heavily defoliated by the larvae.

Family Noctuidae

Achaea janata (Linnaeus). Maryborough, 3 pupae, 6.v.1978 from *A. marina* with damaged leaves. One adult emerged 17.v.1978. Edwards (1978) lists *E. agallocha* as a food plant.

Family Oecophoridae

Barea leucocephala (Turner). QFIC 5485/07. Redland Bay, 2 adults emerged 1.xi.1984 from branches taken from a dead *A. marina*.

Barea sp. QFIC 6243/19. Port Alma, 3 adults emerged Oct. 1986 from *E. agallocha* branch material heavily attacked by cerambycid branch-pruners.

Echiomima sp. n. QFIC 6243/05. Port Alma, emerged 2.xii.1985 from tunnel on underside of branch of *A. marina* collected 13.xi.1985. The tunnel of this xyloxyctine, on the branch was completely inundated by the tide. Similar damage was noticed on the trunks of other *Avicennia* in the area.

nr. *Garrha* sp. QFIC 6248. Redland Bay, emerged 25.ix.1985. The larvae feed on the leaf surfaces of *A. marina*.

Family Tineodidae

Cenoloba oblitalis (Walker). Redland Bay, 8 moths emerged 19 to 20 Aug. 1985 from dead branches of *A. marina* collected 12.viii.1985; Redland Bay, numerous moths emerged in October 1985 from seeds of *A. marina* collected 12.viii.1985.

Common (1970, 1990) records the fruits of *A. marina* as host. These insects were bred from fruits of *A. marina* picked from tree, but the majority of specimens emerged from fallen fruits, indicating oviposition possibly occurs more often in older fruits. The larvae were able to leave fallen fruits to find suitable pupation sites and this also occurred in the laboratory. Field collected, dead branch material also yielded many adult specimens.

Family Pyralidae

Gen. et sp. indet. (Phycitinae). QFIC 6218. Redland Bay, 14 moths emerged in the period 21 to 26.viii.1985 from fruits of *A. marina* picked from the tree on 12.viii.1985. Insectary reared larvae left fruits to find pupation sites. No moths emerged from fallen fruits collected at the same time.

Gen. et sp. indet. (Phycitinae). QFIC 1562. Maryborough, emerged 3.iv.1978. The larva feed on leaves of *A. marina*; QFIC 6391. Long Pocket, Brisbane emerged 14.ii.1987. The larvae feed on the leaves of *A. marina*, some of which were partly rolled.

The above species of Phycitinae are morphologically similar. We have tentatively regarded them as different species due to their behaviours.

Family Saturniidae

Syntherata janetta (White). Long Pocket, Brisbane, eggs and larvae were found on leaves of *A. corniculatum* on 23.i.1987. 3 males and 3 females emerged 17-25.iii.1987; St. Lucia, Brisbane, Aug. 1986: an empty pupal case of this species was found in leaves of *A. marina*. The pupal case was occupied by workers and male alates of *Polyrhachis* sp.

C. tagal has previously been recorded as a host by Manski (1960), and *Ceriops* and *Aegiceras* were recorded by Common (1990).

Family Tortricidae

Gen. et sp. indet. (Olethreutinae). QFIC 6249. Redland Bay, emerged 18.ix.1985 from fruit of *R. stylosa*, collected from tree.

Acknowledgements

We wish to thank Dr I.F.B. Common and Mr. E.D. Edwards for identification of material and for assistance with references. Dr B. Cantrell allowed access to material under his charge. We particularly wish to thank Miss M.A. Schneider for the loan of *Macrocyttara* material in the University of Queensland collection.

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